

Drivers for Revision of the Total Coliform Rule and Consideration of Distribution System Requirements

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Drivers for Rulemaking – SDWA Authority

- SDWA Requirements
 - EPA may set an MCLG for any contaminant that:
 - May have an adverse effect on the health of persons
 - Is known to occur or there is a substantial likelihood of occurrence with a frequency and at levels of public health concern
 - Regulation of the contaminant presents a meaningful opportunity for health risk reduction
 - When it is not economically or technologically feasible to determine the level of a contaminant, EPA can develop a treatment technique requirement



Drivers for Rulemaking – Six-Year Review

- EPA is required to review and revise, as appropriate, each National Primary Drinking Water Regulation no less often than every 6 years
- In July 2003 EPA determined that it was appropriate to revise the TCR
 - Will consider only those revisions that will assure public health protection
- Six-year review findings included concerns about:
 - Frequency and location of monitoring
 - Follow-up monitoring after TC positives
 - The basis of the MCL
- EPA will consider broader issues associated with drinking water distribution systems as the TCR revision is developed



Drivers for Rulemaking – Total Coliform Rule Revisions

- Stakeholder comments included:
 - Total coliform are not appropriate as an indicator of water quality in the distribution system
 - Monitoring frequency may be inadequate to detect some problems
 - TCR may disproportionately affect small systems
- Addressing TCR revision and distribution system issues together may result in more holistic approach



Drivers for Rulemaking – M/DBP FACA Agreement in Principle (2000)

- The Advisory Committee recognized that:
 - “... finished water storage and distribution systems may have an impact on water quality and may pose risks to public health.”
 - “... cross connections and backflow in distribution systems represent a significant public health risk.”
 - “... water quality problems can be related to infrastructure problems and that aging of distribution systems may increase risk of infrastructure problems.”
 - “... distribution systems are highly complex and that there is a significant need for additional information and analysis on the nature and magnitude of risk associated with them.”



Drivers for Rulemaking – M/DBP FACA Agreement in Principle

- The Advisory Committee then recommended that:
 - “... as part of the 6-year review of the Total Coliform Rule, EPA should evaluate available data and research on aspects of distribution systems that may create risks to public health and, working with stakeholders, initiate a process for addressing cross connection control and backflow prevention requirements and consider additional distribution system requirements related to significant health risks.”



Drivers for Rulemaking – Indicators of Risk

- Distribution system contamination identified as cause of 24% of reported outbreaks from 1991-2000 (37 of 153 outbreaks)
 - 15% in 1981-1990 (37 of 241)
 - Percent of outbreaks due to treatment deficiencies has decreased
- Acute and chronic exposures from chemical contamination in the distribution system are known to occur (e.g., cross connections)



Overriding Principles

- EPA believes that an opportunity exists to reduce the TCR implementation burden while maintaining or increasing public health protection
- Given the nature of the TCR, EPA believes that it is important to consider distribution system issues at the same time as the Agency is revising the TCR



Key Activities to Date

- Summarized available data, research, and information on distribution system and TCR issues
 - 9 papers summarizing DS issues
 - 10 papers summarizing TCR issues
- NAS developed report ranking risks and recommending strategies for reducing distribution system risks
 - Published late 2006
- Distribution System Exposure Assessment Workshop held in 2004 to identify approaches for quantifying exposure to distribution system contamination